

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously presented) An optical element comprising:

a first member, which has a first surface including a first concave portion, the first concave portion being made up of three triangular facets that are opposed substantially perpendicularly to each other;

a second member, which has a second surface including a second concave portion and which transmits incoming light therethrough, the second concave portion being made up of three triangular facets that are opposed substantially perpendicularly to each other, and the first and second members being disposed so that the first and second surfaces are opposed to each other,

wherein the optical element comprises a plurality of cubic corner cubes, each of which comprises a first set of triangular planes defined by the first concave portion and a second set of triangular planes defined by the second concave portion so as to provide each cubic corner cube with substantially square reflective planes opposed substantially perpendicularly to one another; and

wherein first and second reflective regions have been formed on the first and second concave portions, respectively, and

wherein at least part of the incoming light that has been transmitted through the second member is reflected from at least one of the first and second reflective regions.

2. (Original) The optical element of claim 1, wherein the first surface includes the first concave portion and a flat portion, the second surface includes the second concave portion and a flat portion, and the first and second concave portions are so disposed as not to face each other.

3. (Original) The optical element of claim 1, wherein the first and second concave portions have substantially the same shape.

4. (Canceled)

5. (Original) The optical element of claim 4, wherein at least part of the incoming light that has been transmitted through the second member is reflected from both of the first and second reflective regions so that the incoming light is retro-reflected.

6. (Original) The optical element of claim 1, wherein at least one of the first and second reflective regions is made of a metal film.

7. (Withdrawn) The optical element of claim 1, wherein the second reflective region is made of a material that has a refractive index lower than that of the second member.

8. (Withdrawn) The optical element of claim 7, further comprising a member for filling the first concave portion on the first reflective region, wherein the first reflective region is made of a material that has a refractive index lower than that of the member for filling the first concave portion.

9. (Original) A reflective display device comprising: the optical element as recited in claim 1; and a light modulating layer interposed between the first and second members.

10. (Original) The reflective display device of claim 9, wherein the light modulating layer comprises a scattering-type liquid crystal layer.

11. (Original) The reflective display device of claim 10, further comprising:
a first flattening member that fills the first concave portion of the first member;
and
a second flattening member that fills the second concave portion of the second member,

wherein the scattering-type liquid crystal layer is interposed between the surface of the first member that has been flattened by the first flattening member and the surface of the second member that has been flattened by the second flattening member.

12. (Original) The reflective display device of claim 10, wherein the scattering-type liquid crystal layer fills the first concave portion of the first member.

13. (Withdrawn) A reflective display device comprising: the optical element as recited in claim [[4]] 1; a transparent substrate disposed to face the optical element; and a light modulating layer, which is interposed between the optical element and the transparent substrate and controlled to assume either a light scattering state or a light transmitting state.

14-16. (Canceled)

17. (Previously presented) A method of making an optical element, the method comprising:

forming a first concave portion on a first surface of a first member and forming a first reflective region on the first concave portion;

forming a second concave portion on a second surface of a second member and forming a second reflective region on the second concave portion; and

disposing the first and second members in such a manner that the first and second members extend along a common plane, that the first surface of the first member is opposed to the second surface of the second member and that the first and second reflective regions do not overlap each other as viewed in a normal direction to the common plane.

18. (Original) A method of making a corner cube array, comprising the steps of:

a) preparing a first member in which at least one first concave portion has been formed in a triangular pyramidal shape, the first concave portion being made up of three triangular facets that are opposed substantially perpendicularly to each other;

b) preparing a second member in which at least one second concave portion has been formed in the triangular pyramidal shape, the second concave portion being made up of three triangular facets that are opposed substantially perpendicularly to each other; and

c) disposing the first and second members in such a manner that a surface of the first member in which the first concave portion has been formed is opposed to a surface of the second member in which the second concave portion has been formed,

wherein the corner cube array is made up of a plurality of cubic corner cubes, each of which comprises a first set of triangular planes defined by the first concave portion and a second set of triangular planes defined by the second concave portion.

19. (Original) The method of claim 18, further comprising the steps of:

forming a reflective region on each of the three triangular facets of the first concave portion; and

forming a reflective region on each of the three triangular facets of the second concave portion,

wherein the second member is transparent, and

wherein the reflective regions provided for the first concave portion and the reflective regions provided for the second concave portion are arranged substantially continuously to each other so that when the reflective regions provided for the first concave portion are used as concave reflective regions, the reflective regions provided for the second concave portion are used as convex reflective regions.

20. (Withdrawn) The method of claim 18, further comprising the steps of:

filling the triangular pyramidal first concave portion of the first member with a convex member having a triangular pyramidal shape corresponding to that of the first concave portion before the step c) is performed; and

securing the convex member in the triangular pyramidal shape onto on the second member after the step c) has been performed.

21-27. (Canceled)

28. (Previously presented) An optical element comprising:

a first member, which has a first surface including a first concave portion, the first concave portion having a first reflective region formed thereon;

a second member, which has a second surface including a second concave portion and which transmits incoming light therethrough, the second concave portion having a second reflective region formed thereon;

wherein the first and second members are respectively extended along a common plane and disposed in such a manner that the first and second surfaces are opposed to each other and that the first and second reflective regions do not overlap each other as viewed in a normal direction to the common plane; and

wherein at least part of the incoming light that has been transmitted through the second member is reflected from at least one of the first and second reflective regions.

29. (Previously presented) The optical element of claim 1, wherein the first and second members are respectively extended along a common plane, and the first and second reflective regions do not overlap each other as viewed in a normal direction to the common plane.

30. (Previously presented) The optical element of claim 1, wherein each of the cubic corner cubes has three substantially square planes that are opposed substantially perpendicularly to each other, and each of the square planes is defined by one of the

triangular facets of the first concave portion and one of the triangular facets of the second concave portion.

31. (Previously presented) The optical element of claim 1, further comprising a liquid crystal layer located between the first and second members.

32. (Previously presented) The optical element of claim 31, wherein the liquid crystal layer is a scattering-type liquid crystal layer.

33. (Previously presented) The method of claim 18, wherein the first and second members are respectively extended along a common plane, the first and second concave portions have first and second reflective regions respectively, and the first and second reflective regions do not overlap each other as viewed in a normal direction to the common plane.

34. (Previously presented) The method of claim 18, wherein each of the cubic corner cubes has three substantially square planes that are opposed almost perpendicularly to each other, and each of the square planes is defined by one of the triangular facets of the first concave portion and one of the triangular facets of the second concave portion.

35. (Previously presented) The method of claim 18, further comprising providing a liquid crystal layer located between the first and second members.

36. (Previously presented) The method of claim 18, wherein the first member includes at least one first flat portion formed therein and the second member includes at least one second flat portion formed therein, and where the step c) includes allowing the first concave portion to face the second flat portion and allowing the second concave portion to face the first flat portion.